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## ACKNOWLEDGMENTS

This Kaho`olawe Cultural Resources Management Plan is the product of many hours of hard work by a committee made up of several individuals with a common interest in the future of Kaho`olawe. The committee had no name, no rules or by-laws, and no designated leader--the committee's only agenda was to put together a plan to protect and enhance Kaho`olawe's cultural resources. This Cultural Resources Management Plan is the result of their work and truly reflects *Aloha `aina*.

Many thanks go to the following individuals who helped create the Management Plan: Dr. Robert J. Hommon, the Navy archaeologist who managed the project so skillfully; Dr. Davianna McGregor, Kehau Abad, and Atwood Makanani of the Protect Kaho`olawe `Ohana who provided guidance and information in regard to traditional cultural values, history and contemporary cultural use of Kaho`olawe; Rowland Reeve of the Kaho`olawe Island Conveyance Commission--an editor *extraordinaire*; Dr. Ross Cordy, Branch Chief for Archaeology, Hawaii State Preservation Office who guided the design of the Management Plan to make it a more useful document; Keoni Fairbanks, representing Maui County, who made valuable suggestions that broadened the scope of the Plan; Hardy Spoehr of the Kaho`olawe Island Conveyance Commission; and Annie Griffin of the State Historic Preservation Office.

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## **SECTION I**

### **EXECUTIVE SUMMARY**

The purpose of this Cultural Resources Management Plan (CRMP) is to protect and preserve cultural resources on Kaho`olawe. It has also been prepared in satisfaction of paragraph IV.D. of the consent decree dated December 1, 1980 filed as a final judgment in Aluli v. Brown, Civil No. 76-0380, U.S. District Court Hawaii. The CRMP describes the history of the island's cultural resource preservation program, the cultural resources found on the island, the agencies involved in the preservation program and the laws protecting the resources. The CRMP also presents guidelines to be followed by users to avoid adverse effects to cultural resources.

If you are planning a visit to Kaho`olawe for any reason you must be familiar with the CRMP. It is not a lengthy document and the information it contains is important. Section II tells you **WHY** the CRMP was prepared; Sections III and IV **DESCRIBE** the environment, history and cultural resources of Kaho`olawe; and Section V tells you **WHO** is involved in preserving the cultural resources and **WHAT** laws pertain. Sections VI and VII tell you **HOW** to avoid adverse effects to cultural resources and describes the Cultural Resource Effect Statement (CREST) that must be completed by all potential users of Kaho`olawe prior to their planned activity on the island. Section IX presents some strategies for enhancing the cultural resources on Kaho`olawe.

## **SECTION II**

### **INTRODUCTION**

The CRMP has been prepared with the cooperative participation of the Navy, the State of Hawaii's Historic Preservation Office, the Protect Kaho`olawe `Ohana, the County of Maui's Planning Department, and the Kaho`olawe Island Conveyance Commission.

#### **PURPOSE**

The purpose of this Cultural Resources Management Plan (CRMP) is to establish management procedures for the Kaho`olawe Archaeological District (District) which is listed in the National Register of Historic Places (National Register). The District consists of over 500 "cultural resources"--archaeological sites and traditional cultural places. ("Cultural resources" as used in the CRMP means the same as "historic properties" which is a term more commonly used in federal and state laws).

The management techniques outlined in the CRMP are intended to avoid or mitigate (lessen) adverse effects on the District's cultural resources and to fulfill the Land Manager's historic preservation legal requirements. At present the Navy is the island's land manager. The term "land manager" refers to the entity that is responsible for the management and administration of Kaho`olawe.

Kaho`olawe is an active military training facility, but ordnance training on the island has been suspended and decisions regarding the future control and status of the island are pending. This CRMP is written from a Federal point of view, but many of its aspects may apply if the island passes from Navy control to another land manager such as the State.

#### **BACKGROUND OF THE CRMP PREPARATION**

This CRMP has been prepared in conformance with the following:

- The National Historic Preservation Act of 1966, as amended, and associated regulations (e.g., 36 CFR 800);
- The Consent Decree and Order filed in the United States District Court in Aluli et al. v. Brown et al., dated December 1, 1980; and
- The Memorandum of Agreement for the Kaho`olawe Archaeological District dated July 20, 1981.

The following is a discussion of these documents, and their role in the preparation of the CRMP and in the history of cultural resource management on Kaho`olawe.

The National Historic Preservation Act of 1966, as amended (NHPA) requires all agencies of the Federal government to provide leadership in the preservation of cultural resources of the United States (Appendix A). Sections 106 and 110 of NHPA and Executive Order 11593, implemented in 1971, establish guidelines and responsibilities for Federal agencies. The Navy, as a Federal agency, is required to follow these guidelines and responsibilities.

Section 106 of NHPA requires that all Federal agencies take into account the effects of their undertakings on historic properties. A Federal undertaking may include the full range of Federal

activities, such as construction, rehabilitation and repair projects, the granting of licenses, and permits, Federal property transfers, and many other types of Federal involvement. Thus, the Navy's activities on Kaho`olawe are considered Federal undertakings. Whenever an undertaking has the potential to affect a cultural resource the Navy, as a Federal agency, is obligated to fulfill the requirements of Section 106 and its implementing regulations in 36 CFR 800 "Protection of Historic Properties" (Appendix B).

The Consent Decree was the result of a 1976 suit (Aluli v. Brown, 437 F. Supp. 602) seeking to enjoin the Navy's bombing activities on the Island of Kaho`olawe. The suit alleged, among other things, that the Navy had violated NHPA and Executive Order No. 11593 by authorizing the bombing without locating, inventorying, or nominating to the National Register all cultural resources on the island that appeared to meet the National Register criteria. Fifty sites on the island were known and discussed in the Navy's Environmental Impact Statement (EIS) prepared in 1972, but since the filing of that EIS the Navy commissioned further surveys and additional archaeological resources had been discovered on Kaho`olawe. Since the archaeological survey program was an ongoing project, the Navy elected to wait to nominate any sites to the National Register until surveys of the entire island had been completed. In the interim, the Navy took precautions to prevent damage to identified sites.

In the Consent Decree dated December 1, 1980 (Appendix C), the parties agreed that the Navy would cooperate with the State Historic Preservation Officer (SHPO) in surveying the island, refer any undertakings that might damage cultural resources to the Secretary of the Interior for an opinion respecting the resources' eligibility for inclusion in the National Register without waiting for completion of the survey, seek an eligibility determination for the entire island, and submit a comprehensive archaeological management plan to the Advisory Council on Historic Preservation. The decree also provided access to the island for religious, cultural, scientific and environmental purposes, and the Navy recognized that the Protect Kaho`olawe `Ohana seeks to act as stewards of Kaho`olawe.

Since the Court's findings, the Navy has pursued a course of action designed to comply with NHPA and the Consent Decree requirements including the following:

- Identifying historic properties.  
A Navy-sponsored intensive archaeological survey of Kaho`olawe Island was completed in 1980. The entire 45-square mile area of the island was inspected, and the survey remains today as the most extensive single intensive survey ever conducted in the Hawaiian islands, as well as being the only intensive survey of an entire Hawaiian island to-date. The survey recorded 544 archaeological sites containing 2,337 features such as campsites, shrines, quarries, and petroglyph clusters, and provided a body of data with which to address important research issues in Hawaiian archaeology.
- Evaluating historical significance.  
The data collected on the survey indicated that archaeological sites on Kaho`olawe could yield important information regarding human ecology, culture history and culture process. Based on this, it was determined that the cultural resources of Kaho`olawe met the National Register criteria for significance, and in 1982 Kaho`olawe was listed on the National Register as the Kaho`olawe Archaeological District.
- Preparation of a Memorandum of Agreement.  
A Memorandum of Agreement (MOA) regarding cultural resources was ratified in 1981 by the Advisory Council on Historic Preservation (Advisory Council), the Department of the Navy and the SHPO (Appendix D).

The MOA stipulations include the following:

1. All archaeological work on the island is to be conducted under the supervision of persons who meet at a minimum the professional qualifications set forth in Appendix C to proposed 36CFR Part 66, and who have professional experience relevant to Hawaiian history, prehistory and culture;
2. The Navy is to ensure compliance with the Archaeological Resources Protection Act of 1979 (P.L. 96-95) and is to advise island personnel and visitors against collection of cultural materials and of the penalties imposed by the Act for such collection;
3. Copies of all scopes of work, reports, and other products generated after the date of the agreement are to be provided to the Hawaii SHPO for review and comment, and copies of any final technical reports are to be furnished to the Advisory Council, the Hawaii SHPO, and the Interagency Archaeological Services, NPS;
4. The Navy is to develop a Cultural Resource Management Plan (CRMP).

A number of years passed without the development of a CRMP, but in 1990, the key parties in the NHPA and Consent Decree actions--the Navy, the SHPO and the Protect Kaho`olawe `Ohana--agreed to move actively toward the preparation of a CRMP. The County of Maui was also involved as a fourth party. The representatives of these four groups drafted an outline for the CRMP in 1990-1991, and the Navy then used their contracting firm (OGDEN) to write the document with direct guidance from all four parties in a series of meetings and review of drafts of the CRMP. These meetings spanned late 1991-early 1992, with this document as the result.

This document is prepared to comply with Federal regulations, but with the likelihood of future control of the island passing to the state or county, the CRMP was developed to be used by a subsequent land manager. Since the State's historic preservation law (Chapter 6E, Hawaii Revised Statutes) and its emerging regulations closely approximate the Federal NHPA and its Section 106 process, making the CRMP slightly more flexible has proven an easy task. Thus, although the CRMP is a Navy document, it is designed to be used by a subsequent land manager who would be required to follow State and local laws.

### SECTION III

## ENVIRONMENTAL AND HISTORIC BACKGROUND

### KAHO`OLAWA ENVIRONMENTAL CONTEXT

Kaho`olawe is the smallest of the eight major islands in the Hawaiian chain, comprising 45 square miles (117 km<sup>2</sup>), and representing only 0.7% of the total land area of the eight major Hawaiian Islands combined. It is located seven miles (11.2 km) southwest of Maui island. The highest point on the island is located in the east-central portion of the island about three-quarters of a kilometer west of Pu`u Moaulanui at an elevation of 1,482 ft. (452m) (Fig. 1). The south and east coasts are characterized by sheer cliffs as high as 300 to 800 ft (91 to 244m) that are cut by a few steep-sided gulches. The west end slopes gradually toward the sea and contains a small number of shallow, intermittent stream beds. The northern coast, trending northeast to southwest, exhibits low cliffs interrupted by 15 major gulches and numerous smaller gullies. More than one quarter of the island, in the area comprising most of the upper slopes of Lua Makika (east-central) and areas to the south and west, has been eroded down to saprolitic hardpan (Hommon 1983).

#### Geology

Kaho`olawe is a single shield volcano with a three-mile diameter caldera located on the eastern edge of the island. Volcanic actions along a rift zone extending from west-southwest and east and north have capped the caldera and built the shield. Along the western portion of the rift zone Pu`u Moiwi remains as an old cinder cone and Lua Kealialalo is the result of a collapsed crater. The north rift zone is indicated by a bulge in the northern portion of the island and contains Lua Kealialuna, a cinder cone, and Lua Makika the eroded crater of a lava shield covering an area of 10 square miles. The east rift zone is marked by 40 dikes in the sea cliff and has little topographic expression (EIS 1979:2-1).

#### Climate

Kaho`olawe, because of its position in the lee of Mount Haleakala, Maui, only receives an average rainfall of about 10 to 25 inches per year, with most rainfall occurring between November and April, when southern (Kona) storms prevail. There is no reliable source of potable water on Kaho`olawe, although rainfall catchment areas exist (Takasaki:1991). Streamflow is intermittent and occurs following rains. The estimated annual temperatures range varies less than 5°C (9°F) from about 21-26 °C (70-79°F) at sea level with a 2.5°C (4.4°F) lower average temperature at the higher elevations of Lua Makika (Hommon 1980b:[7]7).

#### Biotic Environment

Over 95% of the island's vegetation falls into two types--the Hardpan Desert Vegetation and the Prosopis (Kiawe) scrub-forest (Lamoureux 1970). These are described by Ahlo and Hommon (1980:7) as follows:

Hardpan Desert Vegetation is characterized by widely spaced Australian Salt bushes (Atriplex semibaccata) and tree tobacco (Nicotiana glauca). Pillars of uneroded soil (hummocks) are commonly crowned with grasses and herbs but

comprise only a small portion of the total area within the hardpan desert. Generally the hardpan desert is extremely barren.

The second major vegetation zone on the island is the Prosopis scrub-forest. Kiawe (Prosopis pallida) forms the dominant vegetation within this zone. The Prosopis scrub-forest surrounds the hardpan desert vegetation zone. In many gulches Kiawe forms a closed canopy forest with trees ranging from 4 to 10 meters in height. On more exposed locations the trees are more sparsely distributed, smaller and may be shaped by the prevailing winds. Other less common plants in this zone are Leucaena leucocephala (koa-haole), Acacia farnesiana (klu), a few clusters of the indigenous Erythrina sandwicensis (wili wili), and Lantana camara. The remainder of the island is composed of various grass and shrub species of limited distribution.

A botanical survey on Kaho`olawe by Corn, et al. (1980) identified 146 plant species. Of these, 102 are listed as exotic, i.e., introduced following European contact, 42 as native to the Hawaiian Islands or introduced prior to European contact in 1778, and two as unknown. Also of interest is a stand of native cotton, *ma`o* (Gossypium sandwicense) located within the coastal dry shrubland on the west end of the island (Office of State Planning 1993: Figure 5). Those plants found on Kaho`olawe today which were present in the islands prior to contact are listed in Appendix E.

In addition to over 17 species of birds which reside on or frequent Kaho`olawe, four mammal species are common on the island: Rattus rattus (black rat), Rattus exulans (polynesian rat), Mus musculus (house mouse), Felis catus (domestic cat: feral). Capra hircus (goat) was once common but under an intensive Navy goat eradication program, the goat population has been eliminated. Dogs, pigs and chickens the three Hawaiian domestic species, were probably present on the island prior to Western contact (Ahlo and Hommon:1980). Remains of nene, dark-rumped Petrel, Bulwer's Petrel, White-tailed Tropicbird and the Hawaiian owl (Pueo) were also identified in archaeological deposits (Rosendahl 1987: V-75). Cows, sheep, mules, horses and dogs were all present on the island at various times after contact, although none remain on the island today. Ungulate browsing contributed significantly to environmental degradation on the island during the last 150 years.

## **Soils and Erosion**

Kaho`olawe has been subjected to erosion during both pre- and post-contact times. Early accounts commented on the barrenness of the Kaho`olawe landscape, and it is believed there was some displacement of soil prior to contact resulting from the practice of agricultural burning. Today, much of the island has been eroded down to saprolitic hardpan and the majority of soil loss has been ascribed to the effects of overgrazing. The processes of soil formation and erosion on Kaho`olawe are of major importance in formulating various archaeological research issues and establishing the island's chronology.

Studies indicate that the erosion processes began in pre-contact times and escalated into large-scale degradation after contact (Rosendahl 1987).

## **HISTORY**

### **Pre-Contact Period**

What is known of the pre-contact period on Kaho`olawe is gleaned from archaeological data, extrapolations from what is known about the pre-contact period on other Hawaiian islands, and from *mo`olelo* (traditional Hawaiian oral lore). Most archaeologists presently agree that the

Hawaiian Islands were settled by approximately AD 500 by voyagers from eastern Polynesia. The Polynesian origin of the Hawaiian people is evidenced by their language, culture, social organization and technology. The original settlers brought with them domestic plants and animals, including sweet potatoes, taro, pigs, dogs and chickens. Fishing was of great importance on Kaho`olawe. Dryland agriculture was practiced on a small scale on inland slopes and coastal gulches.

Tied to the economic system was an important socioeconomic land unit called the *ahupua`a*, described by Kirch (1985:2) as follows:

...land use was linked to a tiered system of land divisions. Whole islands or parts of large islands constituted *moku*, independent chiefdoms, which were divided into a large number of radial land sections, *ahupua`a*. These generally ran from the forested uplands, across the agricultural lands, and out to the coast and sea, encompassing the resources of both land and ocean.... Each *ahupua`a* was controlled by a lesser chief, who in turn appointed one or more stewards to oversee production, organize work parties, collect tribute, and in other ways represent the chief. *Ahupua`a* were economically self-sufficient to some degree, although differences in the local resource base (agricultural land, water resources, stone for tools, and so on) resulted in differences in the production patterns of individual land sections.

Kaho`olawe is thought to have been an *ahupua`a* of Maui and to have been divided into smaller sections called *`ili* which were occupied and worked by commoners. The *ahupua`a* of Kaho`olawe was probably managed by a local chief representing a Maui district chief. Traditional accounts indicate the inhabitants of Kaho`olawe maintained close ties to Maui.

The essence of Hawaiian religion is related to forces in nature. Religion focused on various nature deities and ancestral spirits whose assistance and aid were sought through rituals including offerings and prayers. Temples, or large *heiau*, usually built on commanding sites were used for community ceremonies. For individuals or small groups, shrines were commonly used for religious purposes. Rituals were accompanied by an offering to enlist the deities' aid in an undertaking. Many shrines were fishing shrines although household and occupational shrines were also used. Both *heiau* and shrines are found on Kaho`olawe. Traditional accounts indicate that Kaho`olawe was closely associated with several deities, including Kanaloa the god of the ocean, the deep sea, and of navigation and carving.

A model of the pre-contact history of Kaho`olawe based on the location and dates of occupation of habitation features has been proposed (Hommon 1980b:[7]55-67). Beginning somewhere around AD 1000 the island was settled and small communities were established along the coast. In time, greater use of inland areas for cultivation of dryland crops and adz quarrying occurred and the original dry forest environment changed to an open savannah of grassland and trees as a result of vegetation clearance for firewood and agriculture (Spriggs 1991). Estimating the ancient population of Kaho`olawe is made difficult by the nature of research on the island. The maximum population was probably a few hundred. As many as 100 or more people may once have lived at Hakioawa, the largest settlement on the island. Located at the northeast end of the island and facing Maui, Hakioawa's size and location reflect Kaho`olawe's ties to that island.

### **Early Post-Contact Period**

From 1779 to 1841 Kaho`olawe is described by various informants as having a small population, estimated at below 100, with fishing as the main economic activity (Silva 1983). Kaho`olawe was made a penal colony sometime around 1830 by Miriam Kekauluohi, the premier of Hawai`i under Kamehameha III. Men were sent to Kaho`olawe and women to Lanai for such crimes as

rebellion, theft, divorce, breaking marriage vows, murder, and prostitution (Kamakau 1961:356-357). Accounts suggest that food was scarce and trips to Maui were occasionally made for provisions. An informant of an island chronicler, Thomas Thrum (1902:121), stated that a small bay named Kaulana was the site of the penal colony. In 1853 the law which established Kaho`olawe as a penal colony was repealed.

### **Ranching Period**

Early ranching. From 1858 to 1910 Kaho`olawe was leased from the Hawaiian government for numerous ranching ventures, none of which proved successful. Sheep and cattle were introduced after a survey by the Hawaiian government in 1857 which favorably evaluated the island for stock raising. The number of sheep and wild goats (introduced prior to 1858) soon grew to be a problem despite efforts to control them, and as early as 1875 many parts of the island were denuded through overgrazing.

Forest Reserve. From 1910 to 1918 the Hawaiian Territorial government designated Kaho`olawe as a Forest Reserve in order to restore the island through revegetation and removal of all livestock. The program failed and leases again became available.

Late Ranching. From 1918 to 1941 Angus MacPhee leased the island (from 1920 in partnership with H.A. Baldwin), and endeavored to build a ranch operation. He made efforts to eradicate the goats and develop a permanent water supply. Ranch headquarters were at Kuhe`eia Bay. This period is described in detail by MacPhee's daughter (Ashdown 1979). In 1939 because of dry conditions and the wishes of the Navy to use a portion of the island for practice purposes, part of Kaho`olawe was subleased to the Navy and the cattle were removed from the island. On December 8, 1941, with the commencement of WWII, the U.S. Army took over the entire island under martial law and ranching operations ended.

### **Military Period**

Kaho`olawe continued to be sublet to the Army until 1953 when Executive Order 10436 placed the island under the jurisdiction of the Secretary of the Navy for use by the Armed Services. The entire island was used as a target range from 1941 to 1968. In 1968 the target zone was modified to include only the central one-third of the island (Fig. 1). In 1976 (Marinco 1976:18) there were 17 air-to-surface targets, and 20 surface-to-surface targets. These targets varied in size from 6-foot rock pyramids to mock airfields and target areas covering several acres. In 1990, all forms of ordnance training on the island ceased in accordance with the 1991 Appropriations Act and an October, 1990 memorandum from President Bush to the Secretary of Defense. The Appropriations Act established the Kaho`olawe Island Conveyance Commission (KICC) to recommend terms and conditions for the conveyance of Kaho`olawe by the United States government to the State of Hawaii. The Final Report of the KICC was submitted to Congress in March 1993.

### **CLIMATIC CHANGE AND ENVIRONMENTAL TRANSFORMATION**

Kaho`olawe's history can be further illuminated in terms of the dramatic environmental transformation that has occurred over time. As initially postulated by Hommon (1980a) and refined by Rosendahl (1987) and Spriggs (1991), pre-contact settlement and use of Kaho`olawe probably transformed the environment from dry forest to primarily grassland/shrub vegetation with substantially less forest cover.

Nineteenth century accounts indicate that the introduction of herbivores, at the time of western contact, resulted in rapid denuding of the island's vegetation. The environmental degradation

reached a threshold in the middle/late 19th century resulting in catastrophic wind and water erosion which altered the face of the island. By the early 1900s ranch wells which had been potable became salty as the denuded island could no longer recharge the ground water basal lens. Feral goat and sheep populations grew (except for some eradication efforts during the Forest Reserve period and the MacPhee ranching period) until 1985 when the Navy instituted an aggressive eradication program. During the 1980s programs of revegetation, soil conservation and tree planting were initiated by the Navy, the State, and the Protect Kahoʻolawe ʻŌhana to begin environmental restoration of the island.

## A NATIVE HAWAIIAN PERSPECTIVE ON KAHOʻOLAWE'S HISTORY

The following text was included at the request of the Protect Kahoʻolawe ʻŌhana. Its inclusion does not indicate Navy verification or confirmation of its contents. Navy archaeologists have been unable to find either oral or written support for some of the following assertions.

[The following section is abridged from McGregor 1993]

According to Native Hawaiians the concept of *wahi pana*, or sacred place, is vital to the understanding of Kahoʻolawe's history. The basis of this concept is the Hawaiian belief that, "the various forces of nature were Gods who formed the earth and imbued it with a dynamic life force and energy" (McGregor 1993:1). Hawaiian chants, creation myths, and oral tradition all indicate the significance of Kahoʻolawe as a *wahi pana*.

Prior to western contact Kahoʻolawe had other names such as *Kanaloa* (the name of the Hawaiian god of the ocean and guardian of navigation), *Kahiki Moe* (the place where the sun sets or goes to sleep, with *Kahiki* also being a metaphor for the original Polynesian homeland) and *Kohemālamalama O Kanaloa* ("Shining Birth Canal of Kanaloa," referring to the importance of the island as a directional aid for the launching of the long voyages of Hawaiian *aliʻi*, or chiefs, between Hawaiʻi and Tahiti). These and other names reflect the importance of the island both as *wahi pani* and *puʻuhonua*, that is, as a spiritual sanctuary and as a directional aid for voyagers.

*Lae O Kealaikahiki* ("Point of the Pathway to Tahiti"), the name for the westernmost point of land, was used as a landmark for navigators as they left Hawaiʻi. Also near this area is a rock referred to as *Pohaku Kahi Keʻa I Kahiki* ("The Rock That Points the Way to Tahiti"), which was another key traditional navigational marker. At Moaʻulaiki there are the remains of a platform used for navigational school and of a housesite for the *kahuna*, or specialist, who instructed the students. The presence of a large number of *koʻa*, fishing shrine, on Kahoʻolawe reflects the fact that fishing resources are varied and plentiful. These *koʻa* served as land markers for ocean fishing grounds, and thus constitute yet another type of navigational aid. One of the most important cultural resources on Kahoʻolawe is a *koʻa* at Hakioawa on the island's eastern coast, which according to legend was constructed by ʻAiʻai, son of Kūʻula, the patron god of fisherman.

By AD 1400 the interior of Kahoʻolawe began to be used for agriculture, and this was the time, also, for the initial development of the Puʻu Moiwi adze quarry, the second largest quarry in the Hawaiian Islands. By the middle of the 17th century a large settlement developed at Hakioawa, which grew to become the island's political and religious center. The island's largest known *heiau* is located at Hakioawa, and was probably constructed during this period. From the early post-contact period, despite the abolishment of chiefly and state rituals by Kamehameha II, traditional Hawaiian religious practices and spiritual beliefs continued on Kahoʻolawe and its use as *wahi pana* persisted, up to the U.S. military take over of the island in 1941. After 1941, in spite of the military restrictions for access to Kahoʻolawe, several Native Hawaiian families managed to occasionally visit the island. In 1976 the Protect Kahoʻolawe ʻŌhana focused public awareness on the problem of access to the island. Since that time the ʻŌhana has regularly visited

the island for religious and cultural purposes and, as stated in the 1993 Kaho`olawe Island Conveyance Commission report, Kaho`olawe "...continues to be a *wahi pana* and serves as a *pu`uhonua* as it has for generations of Native Hawaiians and others who have visited its shores, lived upon its lands, and fished in its surrounding water."

## **SECTION IV**

### **KAHO`OLAWA ARCHAEOLOGICAL DISTRICT AND ITS CULTURAL RESOURCES**

#### **THE SIGNIFICANCE OF KAHO`OLAWA**

The Kaho`olawe Archaeological District (District) was listed in the National Register of Historic Places in 1982. The National Register is the official list of the Nation's cultural resources that are considered to be significant and worthy of preservation and is administered by the National Park Service. The nomination was made based on data obtained during the Navy sponsored Kaho`olawe archaeological survey, which indicated the entire island was a significant cohesive unit worthy of preservation and investigation.

Specific criteria in regard to significance must be met in order for a property to be eligible for listing in the National Register. These criteria are set forth in 36 CFR 60.4 (E) as follows:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts...that possess integrity of location, design, setting, materials, workmanship, feeling and association and

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) that are associated with the lives of persons significant in our past; or

(c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) that have yielded, or may be likely to yield, information important in prehistory or history.

The District was deemed to be eligible for listing under criterion (d) because of the likelihood that many important research questions could be addressed by the information from archaeological data on the island. Some of the research issues listed in the nomination form (Hommon 1980b:[8]17-33) include:

- Establishing a chronology for the island;
- Gaining information on patterns of pioneer settlement, residential permanence and nucleation, dispersal of settlement; social structure, demographics and land division (Ahupua`a);
- Determining effects of environmental change;
- Learning more about the island's economic exploitation and productivity, small scale technology, agricultural technology, and religious structures;
- Testing hypotheses regarding inland expansion and late pre-contact population stability.

Additionally, resources on the island are considered to have the potential to yield information regarding traditional history, Pacific voyaging and Kaho`olawe's role in military history in the Pacific.

On a site-by-site basis, not all of Kaho`olawe's cultural resources appear to be eligible for nomination to the National Register. Nevertheless, the totality of the sites represents a body of data that is unique and important. In the nomination form Hommon (1980b:[8]34) states:

Fundamental to the significance of the archaeological resources of Kaho`olawe is the fact that together they constitute a detailed and complex record of nearly 1000 years of the human history of the entire island. Each archaeological site is inextricably linked to the whole pattern by history, function and environment. While the quantity and quality of information varies from site to site, the usefulness of this information for illuminating the Hawaiian past is fully dependent on its spatial, temporal and functional position within the pattern as a whole.

Kaho`olawe is also of great significance to native Hawaiians and others who, in addition to acknowledging its importance in yielding data regarding Hawaiian cultural heritage, consider it of significance as a symbol of cultural survival and regeneration. It is considered by some to be a *wahi pana*--a sacred place--to be used for education, awareness, and experience in Hawaiian culture, as a place to carry on traditional customs and practices, and as a *pu`uhonua*--a place of refuge and spiritual regeneration. Kaho`olawe is also viewed as a place to practice and advocate *Aloha `Aina*, which is described by the Protect Kaho`olawe `Ohana (`Ohana) (n.d.), as follows:

Aloha `Aina is a traditional concept that lays the foundation for Hawaiian religion, culture and lifestyle. Aloha means love, and `aina means land. The two words together express several levels of meaning. At the deepest level the presence of our ancestors and gods of the land are acknowledged, respected and cherished, through ceremonies both public and private. This intimacy with the `aina is also expressed in the interdependent subsistence relationship between man and his island. Man is nurtured with taro from the land and fish from the sea, and in turn cultivates and nourishes the island. This relationship is finally symbolized by pride in our homeland--patriotism for this land Hawai`i.

## **CULTURAL RESOURCE RESEARCH ON KAHO`OLAWE**

### **Archaeological Studies and Investigations**

The first archaeological survey of Kaho`olawe was conducted by J. F. G. Stokes who visited various parts of the island in 1913, observing house platforms, *heiau*, *ko`a* (fishing shrines), "caves" or rockshelters that had been occupied, and upland areas exhibiting "chips" which he speculated might be associated with adze manufacture. Stokes also excavated a shrine at Kamohio Bay which consisted of a large rock shelter and an adjacent series of stone terraces. Here he recovered a large collection of artifacts, many of them pertaining to fishing activities. Especially interesting were carvings made from sea urchin spines and 47 bundle offerings. Stokes' field notebooks and the artifacts he collected are housed at the Bishop Museum.

The first published work on Kaho`olawe's archaeology was J. Gilbert McAllister's (1933) report entitled Archaeology of Kahoolawe which was based upon the Stokes notes from 1913, a detailed study of the Kaho`olawe materials in the Bishop Museum and upon McAllister's own one-week field survey in February, 1931. The artifacts studied included the materials gathered during his visit as well as those collected by Stokes in 1913. McAllister's report describes 50 sites on Kaho`olawe. The sites included *heiau*, fishing shrines (*ko`a*), house foundations, walls, camp sites, the Pu`u Moiwi adze quarry, a trail, piles of stones, a burial, a terrace, and a cave/dwelling site. He concluded that there was at least a small, semi-permanent population on the island, mainly engaged in fishing activities, but because of the lack of water he felt it was unlikely that the island could have sustained people for an indefinite period (McAllister 1933:58). McAllister considered his survey as essentially thorough, and states (1933:3-4):

Fortunately, unlike those on the other Hawaiian islands, the remains are not completely hidden by native and exotic vegetation. The desolation of Kahoolawe is in this respect an advantage. There are undoubtedly some isolated sites which were not seen, but as the most habitable parts of the island were examined, it is probable that the material which was missed will not prove to be significant.

McAllister's prediction that most of the island's significant sites had been found during his survey proved to be inaccurate; an intensive survey of the entire 45-square mile land surface of Kaho`olawe conducted for the U.S. Navy from 1976 to 1980 recorded a total of 544 sites containing a total of 2337 features (Hommon 1980a). In addition to the survey, 12 test probes (small excavations usually about 25x25 cm) and eight test pits were excavated to determine the presence and general nature of the cultural deposits. During the survey and excavations 10,351 artifacts were collected; most of the artifacts were retrieved from the surface of sites in order to avoid their loss or damage. Basaltic glass flakes comprised the bulk of the artifacts (9354 pieces) and were collected for purposes of dating by hydration-rind analysis and sourcing.

In 1980 a National Register of Historic Places nomination form for Kaho`olawe's archaeological resources was prepared by Dr. Robert J. Hommon (1980b). In the nomination form Hommon presents the island's settlement pattern as comprising three zones--Coastal, Intermediate and Inland (Appendix F, Figure 2). The zones are defined based on the differential distribution of sites on the island--archaeological sites have a tendency to cluster along the coast and in the Inland Zone in the eastern interior, but there are relatively few sites in the Intermediate Zone. The three-zone concept facilitates the formulation of research questions and provides a useful framework for resource research issues that may be addressed by data from archaeological sites on Kaho`olawe.

In 1976 and 1978 Site 109 was investigated for the U.S. Navy (Hommon and Streck:1981). The site is located in the Inland Zone and contained four archaeological features described as "erosionally lagged" (the soil that once formed the matrix containing the cultural items had been totally removed by erosion, leaving them lying on the hardpan). Many archaeological sites in Kaho`olawe's Inland Zone are erosionally lagged sites and appear to be little more than a few scattered basalt stones lying on the surface of the ground. Stones are uncommon in the general vicinity of inland sites, however, and appear to have been carried in. The purpose of the data recovery was to find out what these lagged activity areas represented and to identify their components.

*Figure 2, map of Kaho`olawe with the three zones goes here.*

Analysis of the data indicated that the unworked basalt stones were brought to the site to line or fill fireplaces and/or *imu* (underground ovens). Erosional factors were found to have distorted the original pattern of the hearths by removing some materials and by collapsing vertical relationships so that the site is only represented in two dimensions. Lateral displacement was not great enough to conceal the cultural patterning of the stones, however. This study indicates that lagged sites can yield valuable information in terms of site activity areas and intensity and length of occupation.

During the 1980s the Navy identified archaeological sites in danger of erosion and provided for emergency data recovery and stabilization measures to lessen the impact of erosion. Robert J. Hommon (1983) and Farley K. Watanabe working for Science Management, Inc., investigated ten fireplaces at six inland sites in danger of erosion. Unworked stones from the fireplaces were counted and weighed to provide a data base for the study of erosionally lagged sites. It was found that there was repeated reuse or extended use of the features surrounding the fireplaces suggesting that the Inland Zone features were not simple, single-use campsites. Analysis of charred wood from the sites indicates the pre-contact presence on the island of a substantial variety of woody taxa that occur in dry-land forest habitats--different from the plant community on Kaho`olawe today. The identification of plants that tend to occupy disturbed habitats such as cultivated land provided indirect evidence of cultivation. Several faunal species including the nene, the domestic chicken and the Polynesian rat were identified; these vertebrate species had not previously been reported archaeologically from Kaho`olawe.

In 1982-83 additional data recovery was carried out at eroding archaeological sites within the District by Paul H. Rosendahl, Ph.D., Inc. Thirty-one major features located within 23 sites were investigated. Habitation features, including terraces, activity areas, midden deposits and isolated firepits, constituted the major feature types. Based on the data Rosendahl reached several conclusions: the Coastal Zone contained permanently occupied sites while the Inland Zone was recurrently used for temporary habitation; the Coastal sites exhibited a greater emphasis on fishing and a greater range of activities than the Inland sites; and dryland agriculture was practiced on Inland slopes and Coastal gulches (Rosendahl et al. 1987:VI-12). The study indicates that vegetation changes (especially a decline in tree taxa and an increase in grasslands), and some alluvial erosion occurred before contact, but that the large-scale erosion on Kaho`olawe occurred historically, after 1875. Rosendahl found strong dating evidence to support site occupation in the late 1500s, but suggests that several sites may have been occupied as early as the thirteenth to fourteenth centuries (1987:VI-11).

### **Cultural Value Studies**

The first document discussing the cultural significance of Kaho`olawe was submitted by the Protect Kaho`olawe `Ohana for inclusion in the National Register Nomination Form as an Appendix. It is entitled `Oia`i`o o Kaho`olawe (The Truth of Kaho`olawe), Native Hawaiian Perspectives on the Significance of Kaho`olawe to Hawai`i Nei, and is "an attempt at a summary of the collection of 'grassroot' mana`o (feelings) on the cultural significance of Kaho`olawe to Native Hawaiians both young and old" (Hommon 1980b:Appendix D-2). It contains Native Hawaiian perspectives of their own history, culture and religion.

In 1979, the Navy contracted Environment Impact Study Corporation to gather information on the cultural value of Kaho`olawe. The resulting document, Kaho`olawe Cultural Study (Environmental Impact Study Corporation:1983) was submitted in two parts: Part 1, compiled by Carol Silva and subtitled "Historical Documentation," is a compilation of references to Kaho`olawe in books, newspapers and other documents. The references are presented in chronological order from ancient mythology to the 1980s. Part 2 entitled "Ethnography and Cultural Values" was written by Dennis T. P. Keene and includes data about contemporary cultural values gathered from interviews and published sources.

An additional cultural values study was completed by Keene in 1986 under contract with the Navy. This study was in response to reviews by the Protect Kaho`olawe `Ohana and others indicating the need to summarize the results of the Kaho`olawe Cultural Study and provide additional information. The report, Kaho`olawe Island, Hawai`i Ethnic Significance Overview describes the past and present values of the island and the historic places and locales in terms of both Hawaiian culture and Kaho`olawe history. The study was never published and its findings are disputed by the `Ohana and others. The KICC has also prepared several studies on the cultural and natural history of Kaho`olawe.

## **ARCHAEOLOGICAL RESOURCES**

### **Pre-Contact Resources**

Archaeological investigations on Kaho`olawe have shown that a variety of site types and features exist on the island. Archaeological sites and features are defined as follows:

**SITE:** A location with remains of human activity such as artifacts, food remains, stone debris, and/or architectural structures.

**FEATURE:** A discrete area within a site such as a stone platform, a scatter of artifacts and food remains, or an isolated firepit.

On Kaho`olawe many archaeological sites are multi-purpose, that is, they contain several features, each of which may have a different use. Therefore, archaeological features are regarded as the basic unit for recording and analysis, and each site has been recorded noting each feature and designating them individually (Feature a, b, etc.).

Most of the features recorded on the island are classified as "habitation features" which are areas of general residential activities such as food preparation, and manufacture of tools and craft items. They fall into two categories--those with visible structures and those without structures.

- **Habitation Structures** - Habitation structures include stone platforms, terraces, enclosures, open-sided enclosures, pavings, etc. All structures are of mortarless masonry construction. The building stones are usually locally available basalt, although coral and beach-rock conglomerate were sometimes used. Most habitation structures probably served as foundations for perishable structures of pole and thatch.

- **Habitation Features Without Structures** - These include activity areas, midden scatters and deposits, rock shelters, habitation caves, and fire places. Activity areas contain such things as concentrations of artifacts, stone alignments, erosionally lagged clusters of fire-cracked rocks, etc. They are usually found on the surface in flat or gently sloping areas. A midden (refuse) scatter is an area with artifacts and/or midden distributed on the surface with no evidence of significant sub-surface deposits. Unlike activity areas, midden scatters are not concentrated and have ill-defined boundaries. Midden deposits are subsurface cultural remains and usually cannot be seen except along erosional faces. Rockshelters and habitation caves are protected areas that contain archaeological materials. A fire place is a concentration of charcoal usually surrounded by a rock alignment.
- **Religious features** - Among Kaho`olawe archaeological features believed to have functioned in a religious context are *ko`a* or fishing shrines, inland shrines, and *heiau*.

*Ko`a* - These are enclosures and terraces associated with concentrations of unworked coral--either irregular chunks of branch coral or water-worn coral cobbles. Most Kaho`olawe *ko`a* are within 100 meters of the shore. Usually present at most *ko`a* is at least one water-worn stone, some 30 centimeters to 1 meter in length which was originally in an upright position. Each *ko`a* around the island marks a separate fishing ground.

**Inland Shrines** - On Kaho`olawe fifteen structures located outside the coastal zone were found to contain quantities of unworked branch coral. On the assumption that the presence of such coral was a symbol of sanctity wherever it occurred, these structures are referred to as "inland shrines."

*Heiau* - Three structures in the Hakioawa district on the northeast shore have been tentatively identified as *heiau*. In general throughout the Hawaiian Islands, these sites are usually large, complex stone structures that consist of at least one platform and/or at least one enclosure. Upon these stone foundations a variety of superstructures were constructed of perishable materials within and around which ceremonies took place.

- **Economic features** - Thirty-two archaeological features on Kaho`olawe are classified as lithic quarries and workshops. Fourteen of these features are termed basalt adze quarries and workshops, consisting of large flakes and adze preforms, as well as outcrops and boulders of the basalt source material. The remaining economic features contain basaltic glass flakes and cores and evidently functioned as workshops for the production of cutting tools of basaltic glass.
- **Miscellaneous features** - Petroglyphs depicting human figures, animals and geometric forms were found in 24 features. More than 515 individual petroglyphs have been found on boulders and bedrock faces near the coast and at one feature in the inland zone. Other features are termed "mounds" and include a variety of cairns and piles of stones. Burials and burial caves are also found on Kaho`olawe.

## **Post-Contact Resources**

Fifty-six historic features have been identified on Kaho`olawe. Most of the historic features are located in the Coastal Zone and are associated with the island's ranching period. The area with the greatest concentration of historic features is the old ranching headquarters at Kuheia Bay. This site (175) was mapped in 1983 (Tomonari-Tuggle and Carter 1984) and the features located include enclosures, house sites, concrete and cobble fireplace remains, structures for water catchment and storage, roads and platforms. Another small site (178) near the mouth of Kaulana Gulch may contain the remains of occupation by inmates of the penal colony.

In addition to the resources mentioned above, items relating to World War II must be evaluated for their eligibility for inclusion on the National Register of Historic Places. In cases where items relating to World War II are to be removed from the island, appropriate plans, including proper evaluation and documentation, must be drafted and disposition of these objects must be in accordance with historic preservation law.

### **Areas of Potential Archaeological Site Discovery**

Although Kaho`olawe has been intensively surveyed for archaeological resources, areas of potential archaeological site discovery exist on the island (Figure 3). These areas are located in portions of the island, especially the Inland Zone, that have large grassy areas. If these grassy areas are located on old soils (not newly deposited erosional soil), they could contain subsurface archaeological deposits or cultural resources not easily visible in the heavy grass. It is important for Kaho`olawe users to be aware of these areas in order to avoid damage or destruction of presently unidentified archaeological resources.

### **TRADITIONAL CULTURAL RESOURCES**

The significance of Kaho`olawe as a *wahi pana* (sacred place) and *pu`uhonua* (place of refuge) and cultural learning center is discussed above ("The Significance of Kaho`olawe"). The island thus represents an embodiment of traditional cultural values, and specific goals have been set forth by native Hawaiian groups regarding identification and preservation of the cultural resources which are manifestations of these cultural values. These goals include planning a historical, cultural and living sanctuary; finding, recording and restoring Kaho`olawe's historical sites, educating the public about the abundance of historical information about Kaho`olawe and establishing a natural marine and land reserve (Ritte and Sawyer 1978; Protect Kaho`olawe `Ohana/Fund 1991).

fig 3

## **SECTION V**

### **KAHO`OLawe ARCHAEOLOGICAL DISTRICT MANAGEMENT LEGAL BACKGROUND**

#### **FEDERAL STATUTES AND REGULATIONS**

##### **National Historic Preservation Act of 1966, as amended (NHPA) (PL 89-665)**

NHPA provides the framework of the national historic preservation program by establishing guidelines for the identification, evaluation, protection and preservation of cultural resources (Appendix A). It also provides for the appointment of State Historic Preservation Officers (SHPO) and an Advisory Council on Historic Preservation (Advisory Council) both of which facilitate the implementation of NHPA. It also directs the Secretary of the Interior to maintain a National Register of Historic Places, comprised of significant cultural resources. In order for a cultural resource to benefit from NHPA protection, it must be eligible for listing in the National Register.

Section 106. Section 106 of the National Historic Preservation Act of 1966, as amended, directs all Federal agencies to take into account the effects of their activities on cultural resources that are listed or are eligible for listing in the National Register. While Kaho`olawe is under the jurisdiction of the Navy (a federal agency), the island's cultural resources are protected under NHPA. Section 106 is a succinct directive, and simply states:

The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation established under Title II of this Act a reasonable opportunity to comment with regard to such undertaking.

36 CFR 800. These are the regulations of the Advisory Council that define the process used by a Federal agency to meet the responsibilities set forth in Section 106 of NHPA (Appendix B). Four steps are involved in what is called the "Section 106 Process":

- Identification and Evaluation of cultural resources - The first step in the process is to identify all the cultural resources the undertaking may affect. The agency reviews background material and contacts the SHPO and any other person who may know about cultural resources in the area. Based on that data the agency decides if further surveys are needed and conducts them if necessary. The agency then evaluates the properties for eligibility for inclusion in the National Register, using the significance criteria discussed in Section IV. Kaho`olawe has been completely surveyed and is listed in the National Register as the Kaho`olawe Archaeological District, therefore, any Federal undertaking on the island is subject to the next three steps.

- Assessing effects - If cultural resources eligible for listing in the National Register are found, the agency then has to determine in consultation with the SHPO, as well as other interested parties, what effects the undertaking will have on the resources ("Effects" are discussed in Section VI). The agency 's determination can be:

No Effect: the undertaking will not affect cultural resources;

No Adverse Effect: the undertaking will affect cultural resources, but the effect will not be harmful; or

Adverse Effect: the undertaking will harm one or more cultural resources.

- Consultation - If there is no effect, or if the effect is not adverse, the agency may proceed with its undertaking. If the effect is adverse, the agency consults with the SHPO to avoid or lessen the harmful effects. Others may be consulted such as local governments, Indian tribes, property owners, and the Advisory Council. When measures are agreed upon to reduce or mitigate the adverse effect, a Memorandum of Agreement (MOA) is written setting forth those measures and is signed by the SHPO and the agency. The Advisory Council may also be a signatory. If the consultation is unproductive and no agreement is reached, either the agency, the SHPO or the Advisory Council may end the consultation process and the agency must present appropriate documentation to the Advisory Council and request their comments.
- Advisory Council comment - The Advisory Council may fulfill its role of having commented on the undertaking by signing a resulting MOA, thus completing the Section 106 process. Otherwise, the agency submits the MOA signed by the SHPO and the agency to the Advisory Council for review and acceptance. If the consultation process was terminated prior to an MOA, the Advisory Council issues its written comments to the agency.

When an MOA is executed, the agency may proceed with the undertaking under the terms of the MOA. If there is no MOA, the agency may proceed by taking into account the Advisory Council's written comments.

If a Federal undertaking is large, complex or repetitive, an agency may negotiate a Programmatic Agreement (PA) instead of a separate MOA for each activity in the undertaking. A PA covers all present and future activities that are part of the program in the PA. This means that the agency does not need to seek additional comments from the Advisory Council for each activity, because the ratified PA constitutes the Advisory Council's comments.

### **The American Indian Religious Freedom Act (PL 95-341)**

This Act establishes the policy of the United States in protecting the belief in, and the free exercise and expression of, traditional religions by American Indians and provides access to sacred sites and the use of sacred objects. It also requires Federal agencies to facilitate and accommodate the policy.

## **Archaeological Resources Protection Act of 1979 (ARPA) (PL 96-95)**

This Act prohibits the unauthorized excavation of archaeological sites and removal of artifacts on federally owned lands and establishes civil and criminal penalties for violations. It also imposes penalties on interstate commerce of artifacts illegally removed in violation of ARPA or in violation of any state or local ordinance. To ensure that all excavations are under the supervision of qualified professionals and are conducted properly, it provides for a permit system for archaeological investigations. Two amendments to the Act were enacted in 1988; the first required the Tennessee Valley Authority and the Departments of Interior, Agriculture and Defense to develop plans for surveying lands under their control for archaeological resources, and for these agencies to develop documents for the reporting of suspected violations of ARPA. The second amendment lowered the monetary assessment of the damage to a site which would result in a felony conviction, fine, and imprisonment. In addition, it required Federal land managers to create a public awareness program on the significance of archaeological resources and the need to protect them.

## **Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (PL 101-601)**

NAGPRA covers the inventory and disposition of two categories of artifacts and remains--human remains and associated funerary objects, and unassociated funerary objects, sacred objects, and objects of cultural patrimony. The Act outlines the types of inventories and artifact summaries that are required for each category and provides a process for repatriation (Appendix G). Currently, in Hawai'i there are approximately 70 Native Hawaiian organizations who must be notified and consulted about NAGPRA undertakings involving Native Hawaiian remains and/or objects. This document considers the group Protect Kaho'olawe 'Ohana as the primary Native Hawaiian organization to be consulted in instances where lineal descendants have not been found.

## **Chapter 6E, Hawaii Revised Statutes**

The State of Hawaii's historic preservation program is administered by the Historic Preservation Division (HPD) of the Department of Land & Natural Resources (DLNR), called the SHPO in federal matters. The State's historic preservation law is Chapter 6E, Hawaii Revised Statutes. Section 8 requires projects directly undertaken or funded by state and county agencies to take into account the effect of the project on significant historic sites. Similarly, when the state transfers land (sells, leases, etc.), the effect of the project on significant historic sites must be taken into account under Section 7. The above actions must have the HPD's approval prior to the action commencing, and thus the department has regulatory control. Approval involves compliance with the historic preservation process in the same manner as at the federal level--essentially identification of significant historic sites in a project area, and attempts to properly mitigate those sites.

Section 42 of Chapter 6E requires any state or county agency to give the department (DLNR-HPD) an opportunity to comment on the effect of a project (involving a permit, license, certificate, land use change, subdivision, or other entitlement for use) on significant historic sites. The same process is followed--identification of significant historic sites and mitigation--but the DLNR-HPD does not have regulatory authority. Nonetheless, the working relationships with county and state agencies are quite good, and recommendations are nearly always accepted.

If Kaho'olawe comes under State or County control, projects would have to undergo a historic preservation review process, with the HPD as the key agency. At this time, projects which are direct undertakings of, or are funded by State and County agencies are required to comply with Chapter 6E, in addition to federal laws. In these cases the state or county agency coordinates with the HPD.

Section 43 of Chapter 6E establishes regulatory controls for treatment of prehistoric and historic burials. If the island passes into State or County jurisdiction, any burials found on the island must be treated in accordance with this section of the law.

### **Other Legal Documents**

Legal documents pertaining to the development of the CRMP are the Kaho`olawe MOA (Appendix D) and the Kaho`olawe Consent Decree (Appendix C) which have been discussed previously in Section II "Introduction."

### **AGENCIES AND ORGANIZATIONS INVOLVED IN THE MANAGEMENT OF KAHO`OLAWA CULTURAL RESOURCES**

#### **U. S. Navy**

In 1953, Executive Order 10436 placed Kaho`olawe under the jurisdiction of the Secretary of the Navy. Because the island is under its jurisdiction, the Navy is the federal agency responsible for initiating and completing the Section 106 process in regard to cultural resources on Kaho`olawe and is presently acting as Land Manager. The Navy has two staff archaeologists in its Naval Facilities Engineering Command who are involved in the island's cultural resource projects and assist in the Section 106 review process.

#### **Protect Kaho`olawe `Ohana (`Ohana)**

The Protect Kaho`olawe `Ohana is a group of Native Hawaiians and their supporters who have actively sought to end the bombing and military use of Kaho`olawe and to secure the island's return to the people of Hawai`i. The `Ohana has participated in revegetation and conservation programs and is concerned with the preservation and protection of cultural resources on Kaho`olawe. The Consent Decree guarantees that the `Ohana has access to Kaho`olawe for religious purposes, and requires that any action to be taken primarily for the protection, removal or reburial of human remains on the island shall be developed in consultation with representatives of the `Ohana. The National Historic Preservation Act of 1966, as amended, identifies the `Ohana as a Native Hawaiian organization. As such, the `Ohana must be consulted on matters relating to the Section 106 process.

#### **Kaho`olawe Island Reserve Commission (KIRC)**

Hawaii Revised Statutes, Chapter 6K, created the KIRC to have policy and management oversight of the Kaho`olawe Island Reserve. The commission consists of 7 members: 1 from the `Ohana; 2 appointed by the governor from a list provided by the `Ohana; 1 a trustee of the Office of Hawaiian Affairs; 1 a county official appointed by the governor from a list submitted by the Mayor of Maui; the Chair of the Department of Land and Natural Resources; and a member appointed by the governor from a list provided by native Hawaiian organizations. The statute further requires that the island be used solely and exclusively for the following purposes:

- 1) preservation and practice of all rights customarily and traditionally exercised by the native Hawaiians for cultural, spiritual, and subsistence purposes;
- 2) preservation and protection of its archaeological, historical, and environmental resources;
- 3) rehabilitation, revegetation, habitat restoration, and preservation; and

4) education.

The island is to be preserved in perpetuity for the above uses and commercial uses are strictly prohibited.

#### **Kaho`olawe Island Conveyance Commission (KICC)**

The KICC was established pursuant to Congressional legislation to study and recommend terms and conditions for returning Kaho`olawe from Federal jurisdiction to the State of Hawaii. The Commission submitted its final report with findings and recommendations to Congress in March, 1993. The KICC was dissolved in September, 1993.

#### **Land Manager**

The Land Manager is an agency or organization that controls Kaho`olawe. The Navy is the current Land Manager, but control of the island will pass to other entities in the future.

#### **State Historic Preservation Officer (SHPO)**

The SHPO is appointed by the Governor and is responsible for ensuring that the National Historic Preservation Act is carried out for the Secretary of the Interior. As well as administering the State Historic Preservation Program, various responsibilities include identifying and nominating eligible properties to the National Register, conducting cultural resources surveys, preparing statewide preservation plans, and administering a range of assistance programs.

The SHPO's role in regard to the CRMP is to review undertakings for effects on cultural resources and advise and assist the Land Manager in complying with historic preservation laws. The Land Manager and the SHPO work together in the consultation process to assess effects and agree on ways to avoid or reduce the adverse effects on cultural resources. The SHPO is the Chairperson of the Department of Land and Natural Resources in Hawai'i and has a support office (the State Historic Preservation Division) with a professional staff. The main branches in the division are Archaeology, History and Culture, and Architecture. For Kaho`olawe, most review of undertakings are initially done by archaeological staff, although burial and cultural actions also involve the historical and cultural staff.

### **Advisory Council on Historic Preservation (Advisory Council)**

The Advisory Council, established under Section 201 of NHPA, advises the President and the Congress on matters relating to historic preservation and recommends studies in such areas as the adequacy of statutes and regulations pertaining to historic preservation activities. Other duties include reviewing the policies and programs of Federal agencies and suggesting methods to improve the effectiveness, coordination and consistency of those policies and programs with the policies and programs carried out under NHPA. The Advisory Council works in conjunction with the SHPO to make sure that historical values are given careful consideration when Federal projects and actions are planned.

The Advisory Council is notified when an undertaking will have an effect on National Register eligible cultural resources. If the effect is determined to be adverse, the Advisory Council may choose to participate in the consultation between the Federal agency and the SHPO to seek ways to avoid or reduce adverse effects to the historic property. The Advisory Council reviews, and may be a signatory to, any MOA reached through consultation regarding adverse effects on the island's cultural resources; it may accept the MOA, advise the Navy of changes to the Memorandum of Agreement that would make the MOA acceptable, or provide the Navy with comments on the undertaking.

### **Maui County**

Pursuant to NHPA, the County of Maui is established as a certified local government and provides review and comment on undertakings involving National Register sites in its jurisdiction. Kaho`olawe is included within the County of Maui. Should control of the island be conveyed from the Navy to another entity, the role of Maui County in the management of Kaho`olawe's cultural resources will be determined by an agreement between SHPO and Maui County.

**SECTION VI**  
**POTENTIAL EFFECTS ON**  
**KAHO`OLawe ARCHAEOLOGICAL DISTRICT'S**  
**CULTURAL RESOURCES**

**INTRODUCTION**

The U. S. Navy, as a Federal agency, is required under Section 106 of NHPA to assess the effects of any undertaking that would affect any component of the Kaho`olawe Archaeological District. The term "undertaking" is formally defined in 36 CFR 800.2 as meaning:

...any project, activity, or program that can result in changes in the character or use of historic properties, if any such historic properties are located in the area of potential effects. The project, activity, or program must be under the direct or indirect jurisdiction of a Federal agency or licensed or assisted by a Federal agency....

(a) An undertaking has an effect on a historic property when the undertaking may alter characteristics of the property that may qualify the property for inclusion in the National Register. For the purpose of determining effect, alteration to features of the property's location, setting, or use may be relevant depending on a property's significant characteristics and should be considered.

(b) An undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties include, but are not limited to:

- (1) Physical destruction, damage, or alteration of all or part of the property;
- (2) Isolation of the property from or alteration of the character of the property's setting when that character contributes to the property's qualification for the National Register;
- (3) Introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting;
- (4) Neglect of a property resulting in its deterioration or destruction; and
- (5) Transfer, lease, or sale of the property (36 CFR 800.9).

Effects can also be direct and indirect, that is, they can occur as an immediate consequence of an activity (direct), or they may be the result of a direct activity but removed from that direct activity in time and/or distance (indirect). For instance, the construction of a road may not

directly affect any cultural resources, but the indirect effect of that construction may facilitate access to an archaeological site, thereby increasing the possibility that the site could be destroyed, damaged or vandalized.

Adverse effects can occur to archaeological sites thereby destroying or diminishing their research, interpretive, and cultural value. The research value of a property lies in the information it can yield as contained in the material remains of past human behavior. If the relationship or fabric of the material remains are altered, the research value diminishes.

These material manifestations are spatially related both vertically and horizontally. These spatial relations between artifacts, soils and floral and faunal remnants are the raw data from which inference about past human behavior are derived. The spatial relationship among these elements reflect the behavioral processes and activities that produced them in a systematic and discernible manner. Through careful study, they can shed light on past lifeways.

In order for the archaeologist to interpret this material, the spatial relationships as well as the material remnants themselves must remain in a context approximating that existing when the material was first deposited (Ahlo and Hommon n.d.:39-40).

As well as the movement of site materials both horizontally and vertically, other adverse effects to archaeological sites include compaction, fracturing, changes in chemical makeup, and many others. Although somewhat less tangible, interpretive and cultural values can be adversely affected as outlined in 36 CFR 800.9, items 1-4, listed above.

The following is a discussion of activities that might adversely affect cultural resources on the island. In this discussion the terms "archaeological site" and "traditional cultural place" are used. As previously defined, the term "archaeological site" refers to an area containing either cultural resources or human remains.

"Traditional cultural place" means any site or place customarily used or considered significant by knowledgeable Native Hawaiians. A traditional cultural place can include such things as hillsides, shorelines, traditional gathering places and trails. On Kaho`olawe many traditional cultural places are also archaeological sites. Like archaeological sites, traditional cultural places can be adversely affected: "...any damage to or infringement upon them is perceived to be deeply offensive to, and even destructive of, the group that values them" (National Register Bulletin 38:2). Both traditional cultural places and archaeological sites are equally important to protect and preserve.

The term "damage" is used to indicate harm to an archaeological site or traditional cultural place. It can include a range of things from destruction or displacement of artifacts and deposits to introduction of inappropriate visual effects resulting in loss of feeling and association. Damage from erosion resulting from increased activity on or near a site may occur days or years after the completion of the activity.

"Contemporary cultural use" refers to the use of a traditional place, site or objects, by contemporary Native Hawaiians in accordance with traditional cultural rules of practice or other practices important in maintaining their historical identity.

The phrase "in compliance with all historic preservation legal requirements" means compliance with Section 106 of NHPA and Chapter 6E, Hawaii Revised Statutes.

"Cultural resources orientation" refers to a program presented by the Land Manager to educate first-time island visitors and personnel about cultural resources.

## **EFFECTS COMMON TO MANY ACTIVITIES**

The preceding sections have been largely written for use by the Land Manager. This section is intended for use by visitors to the island.

### **Walking**

Possible Adverse Effects: Walking on an archaeological site can cause damage to cultural resources. When cultural resources are damaged valuable scientific information is lost and the visual integrity of the site can be destroyed. Walking on a site can cause erosion of the site soil. You may be tempted to collect artifacts while walking on a site, but artifact collection is a felony under the Archaeological Resources Protection Act of 1979. If Kaho`olawe is transferred to the State of Hawaii, artifact collection will be a misdemeanor under Hawaii State's Chapter 63, H.R.S.

Ways to Avoid Adverse Effects: Stay on designated trails; do not walk on archaeological sites. If your visit includes off-trail walking, make sure you are accompanied by a guide approved by the Land Manager. When accompanied by an approved guide, walk only in the safe areas indicated by the guide. If you have the Land Manager's permission to walk on a site, walk carefully. Never pick up or collect anything. Do not mar or deface any object or structure at a site.

### **Helicopter and Boat Landing**

Possible Adverse Effects: Sites can be damaged if a helicopter takes off or lands near them. Helicopters, because of their ability to land on a variety of terrains, have a great potential to adversely affect cultural resources. Boat landings in archaeologically sensitive areas could damage sites located at the shoreline. Boat landings may also facilitate non-authorized access to coastal sites.

Ways to Avoid Adverse Effects: Helicopter landings and takeoffs are restricted to landing pads or other designated places except in cases of emergency. Boat landing is restricted unless it is approved by the Land Manager (e.g., to facilitate authorized access). Helicopter pilots and boat operators must attend the cultural resources orientation presented by the Land Manager.

### **Driving - Vehicular Traffic**

Possible Adverse Effects: Vehicular traffic on or near an archaeological site can damage and move site components. Traffic can also cause erosion, resulting in site degradation.

Ways to Avoid Adverse Effects: All vehicular traffic is restricted to established roads except where authorized by the Land Manager. No vehicles are allowed on the island unless approved by the Land Manager.

### **Camping/Overnight Use**

Possible Adverse Effects: The adverse effects described under "Walking" also apply to camping and overnight use. In addition, building shelters, pitching tents, trash disposal, wood collecting, building fire rings, and other activities associated with camping, if conducted on

or near a site, can damage cultural resources; these activities also destroy the visual effects that are an important aspect of certain traditional cultural sites.

Ways to Avoid Adverse Effects: Camp only in areas designated by the Land Manager.

### **Fires/Campfires**

Possible Adverse Effects: If fires and campfires are set on or near archaeological sites, valuable archaeological data can be destroyed by burning. The cutting of trees or shrubs, or gathering kindling from the surface of a site for a fire can cause site erosion. Building fire rings on a site is a particular concern because the stones might be taken from the archaeological deposits or structures. The introduction of charcoal, chemicals or any carbon-based substance can damage a site because it contaminates radiocarbon and other samples used in archaeological studies.

Ways to Avoid Adverse Effects: Do not build fires unless you are permitted to do so by the Land Manager. If you are permitted to build fires you must build them in a way that is approved by the Land Manager.

### **Use of Environmental Resources - Gathering Plants/Cutting Trees**

Possible Adverse Effects: Any use of environmental resources on or near a site can damage it physically and visually. Gathering shrubs and cutting trees on or near a site can initiate site erosion by opening the site to wind or rain. Cutting wood near a site may mar its visual integrity.

Ways to Avoid Adverse Effects: Do not cut trees or gather plants, soil or any other material unless authorized by the Land Manager.

### **Fishing**

Possible Adverse Effects: Fishing from or near an archaeological site or gathering shellfish near an archaeological site can damage the site. Some fishing and gathering methods may be contrary to methods that have traditional cultural value for Native Hawaiians.

Ways to Avoid Adverse Effects: All fishing is restricted to individuals approved by the Land Manager. All fishing activities should follow the *konohiki* fishing management program with the approval of the Land Manager.

## **Waste Disposal**

Possible Adverse Effects: Waste disposal on or near an archaeological site can severely affect the site by contaminating deposits. Any waste disposal, including disposal of human waste, that involves digging and covering at a site destroys the site deposits. Any littering or trash disposal on a site of traditional cultural value visually degrades that site.

Ways to Avoid Adverse Effects: All waste should be disposed of in areas designated by the Land Manager or taken off the island.

## **Digging**

Possible Adverse Effects: Effects such as those listed in "Waste Disposal" apply to any digging activities.

Ways to Avoid Adverse Effects: Any digging activities must be authorized by the Land Manager. The excavator must attend the cultural resources orientation and be familiar with areas in which buried archaeological sites could occur (Figure 3).

## **MILITARY**

The Consent Decree (Appendix C) protects Kaho`olawe's cultural resources from adverse effects due to military activities in several ways. While the Consent Decree remains in effect, some of its requirements may be outdated. The Consent Decree requires the Navy to remove surface ordnance from approximately 10,000 acres of the surface of Kaho`olawe deemed to be of significance in restoring the religious, cultural, historic and environmental values of Kaho`olawe (pp. 3-4); the Navy must minimize the use of live ordnance (p. 5); all military users of Kaho`olawe must submit Standard Operating Procedures for Kaho`olawe which include measures to prevent adverse impacts to archaeological sites (p.8); commencing with the use of ordnance-cleared areas the island is to be used for religious, cultural, scientific and educational purposes (p.8); Kealaikahiki cannot be used by the Navy (p.8); sites in areas used by ground troops must be surrounded with markers (p.9); ground troops using Kaho`olawe must be instructed in the location and importance of archaeological sites and be aware that they must avoid all marked areas (p.10); all field maps used by ground troops must contain symbols representing the location of known archaeological sites; and aircraft targets within 300 meters of archaeological sites and naval gunfire targets that are within 457 meters of archaeological sites are prohibited (p.10).

## **Ground and Amphibious Training Without Ordnance**

Possible Adverse Effects: Military training actions including activities listed under "Effects Common to All Activities" can damage sites. Any discharge of chemicals on an archaeological site can cause an adverse effect.

Ways to Avoid Adverse Effects: The Land Manager shall make sure that the activity is in compliance with all historic preservation laws prior to the start of the activity. All personnel involved must attend the cultural resources orientation.

## **Aircraft Training Without Ordnance**

Possible Adverse Effects: Activities listed under "Aircraft and Boat Landing" above could have adverse effects to archaeological sites.

Ways to Avoid Adverse Effects: Prior to the activity the Land Manager shall ensure compliance with historic preservation laws and pertinent documents.

## **Military Maintenance and Support**

Possible Adverse Effects: Military support and maintenance could have adverse effects on archaeological sites such as those discussed above under "Effects Common to Many Activities." The use of large, ground moving equipment such as bulldozers damage sites.

Ways to Avoid Adverse Effects: Prior to the activity all historic preservation law requirements must be met. Support vehicles shall be restricted to existing roads and parking areas. Personnel must attend the cultural resources orientation.

## **Ordnance Clearance**

Possible Adverse Effects: Detonation of ordnance on or near an archaeological site can damage or destroy cultural resources. If the clearing crews were to walk on archaeological sites, adverse effects such as those listed under "Walking" could occur.

Ways to Avoid Adverse Effects: The Land Manager must determine what cultural resources might be affected by explosive ordnance disposal (EOD) operations and inform the EOD technicians where the sites are and how to avoid adverse effects to the sites. EOD technicians and other personnel involved in the clearance must attend the cultural resources orientation.

## **REPAIR, STABILIZATION OR RESTORATION OF CULTURAL RESOURCES**

Possible Adverse Effects: The effects of repair, stabilization and/or restoration of cultural resources are largely beneficial. Nevertheless, adverse effects can occur from a variety of causes. When repairing or restoring structures such as *heiau*, *ko`a*, shelters, walls, etc., an adverse effect can be created by altering or destroying the original qualities of the feature through the use of different materials or by altering the original style or form. Also, an adverse effect can occur if reinforcement used for structural stability is not concealed and detracts from the visual integrity of the property. Ground disturbance near a restoration, repair or stabilization project can adversely affect archaeological deposits nearby.

Ways to Avoid Adverse Effects: Any development, repair, stabilization or restoration of cultural resources must be in compliance with all historic preservation legal requirements and must be preceded and accompanied by archaeological investigation as appropriate. The design and specifications for any project must be developed in consultation with the Land Manager and the SHPO. If architecture is affected, its style and all distinctive features such as size, scale, mass, color and materials must be retained. The ground around the feature to be repaired, stabilized or restored should be minimally disturbed.

## **RESEARCH**

### **Archaeological**

Possible Adverse Effects: Adverse effects can result from incorrect mapping, poor excavation techniques and record keeping, and improper analysis of the material collected. Similarly, an adverse effect occurs if excavations are conducted by non-qualified individuals and if the results of an excavation are not written up to acceptable standards.

Ways to Avoid Adverse Effects: Any archaeological work-- survey, collection or excavation--must be approved by the Land Manager in consultation with the SHPO prior to the undertaking. If the island is under the jurisdiction of a Federal agency, the plans must meet the standards contained in 36 CFR 66.2 (Appendix H).

### **Other Research Activities**

Possible Adverse Effects: Non-archaeological researchers can adversely affect archaeological sites in ways described in "Effects Common to Many Activities." Data collection programs can have adverse effects if portable items and samples are collected from an archaeological site. For example, if a core sample were taken from an archaeological site the archaeological deposit would be damaged.

Ways to Avoid Adverse Effects: Anyone conducting surveys or collecting data must submit a research design and survey methodology, including techniques, to the Land Manager for review prior to the activity. Do not collect data or dig on or near archaeological sites. All researchers must attend the Land Manager's cultural resources orientation.

## **CONTEMPORARY CULTURAL USE**

### **Cultural and Religious Access**

Possible Adverse Effects: All the adverse effects listed under "Effects Common to Many Activities" apply.

Ways to Avoid Adverse Effects: Every group and/or individual seeking access to Kaho`olawe for cultural and religious purposes must attend the cultural resources orientation. Notify the Land Manager each time the island is accessed and submit the plans and itinerary of the group.

### **Reinterment/Repatriation of Human Remains and Sacred Objects**

Possible Adverse Effects: If remains, sacred objects and other objects referred to in NAGPRA are reinterred in an archaeological site, the site could be damaged.

Ways to Avoid Adverse Effects: If any repatriation or reinterment of Native Hawaiian human remains, burial goods and sacred objects is planned, the reinterment must meet the requirements of NAGPRA and NHPA, and be planned in full with the `Ohana, the Hui Malama

i na Kupuna o Hawai'i Nei, the Office of Hawaiian Affairs, and SPHO. The Consent Decree allows the `Ohana to conduct appropriate religious ceremonies in connection with burial protection, removal or reburial.

### **Modification, Use and Maintenance of Archaeological Sites and Associated Objects for Ceremonial and Other Contemporary Cultural Purposes**

Possible Adverse Effects: The use and maintenance of archaeological sites and associated objects for ceremonial and other contemporary cultural purposes can involve the adverse effects listed under "Effects Common to All Activities" and "Repair, Stabilization or Restoration of Cultural Resources." Any modification or treatment of a site in a manner not in accord with contemporary and/or traditional values is an adverse effect. Modification of a site through construction of buildings and features not matching the original construction can damage a site.

Ways to Avoid Adverse Effects: Any group using an archaeological site or object for ceremonial and other contemporary cultural purposes must attend the cultural resources orientation and be aware of possible adverse effects listed under "Effects Common to Many Activities" and "Repair, Stabilization or Restoration of Cultural Resources." The Land Manager must be notified of any planned modification to an archaeological site in order to meet applicable historic preservation law requirements. Any use, modification or maintenance of an archaeological site must be approved by the Land Manager in consultation with SHPO, the `Ohana and other appropriate Native Hawaiian groups. Because of the fragile nature of archaeological sites, access is limited to small groups at any one time. Contemporary modifications to archaeological sites must be documented, mapped and photographed by the responsible parties, and the documentation placed on file with the SHPO in order to avoid confusion over modern and prehistoric features of the sites.

### **Modification, Use and Maintenance of other Cultural Resources**

Possible Adverse Effects: Modification, use and maintenance of cultural resources other than archaeological sites that is inappropriate and contrary to contemporary and/or traditional cultural values is an adverse effect.

Ways to Avoid Adverse Effects: Any group using a cultural resource other than an archaeological site or object must attend the cultural resources orientation and be aware of possible adverse effects listed under "Effects Common to Many Activities" and "Repair, Stabilization or Restoration of Cultural Resources." The Land Manager, the `Ohana and other appropriate Native Hawaiian groups should be contacted prior to any modification, use and maintenance of cultural resources other than archaeological sites, and their wishes taken into account.

### **Construction of Indigenous-Style Structures or Features**

Possible Adverse Effects: Construction of indigenous-style structures or features on or near an archaeological site can result in adverse effects including those listed in "Effects Common to Many Activities" and "Facilities and Infrastructure Construction and Maintenance-Non-Military" (below). They also may have an adverse effect on a site by altering the integrity of features, material and setting.

Ways to Avoid Adverse Effects: No construction can take place on an archaeological site until the Land Manager has met all the historic preservation legal requirements and consulted with the SHPO. The group or individuals planning such construction

or structure must submit documentation to the Land Manager discussing the project plans and effects to the archaeological site; the information should be thorough enough so that the Land Manager can complete the legal requirements. In addition, Native Hawaiian groups must be involved to assure that the construction or structure does not adversely affect any traditional cultural site.

#### **PERMANENT CAMPS/SETTLEMENT FACILITIES CONSTRUCTION AND MAINTENANCE - NON-MILITARY**

Possible Adverse Effects: Projects such as installing underground utilities, pavements and other modern facilities and the use of construction tools such as shovels and wheelbarrows as well as heavy machinery or equipment can damage sites. Construction can leave the ground bare and subject to surface erosion. Construction of visually inappropriate structures on a traditional cultural place can have an adverse effect.

Ways to Avoid Adverse Effects: Notify the Land Manager before the start of any construction to make sure no archaeological or traditional cultural site is affected. Present erosion control measures to the Land Manager before the start of the project. If a traditional cultural place is affected, consultation with the `Ohana and other appropriate Native Hawaiian groups is required prior to construction. If an archaeological site is affected all historic preservation law requirements must be met before start of the project.

#### **EDUCATIONAL**

##### **Site visits to Cultural Resources and Site Interpretation Programs**

Possible Adverse Effects: In addition to adverse effects listed under "Effects Common to Many Activities," educational site visits can expose sites to the risk of vandalism by unsupervised visitors. Erection of signs, trails and other interpretive elements can damage the deposits and visual effects of a site.

Ways to Avoid Adverse Effects: Educational site visits must be authorized by the Land Manager before the event. All members of the group must attend the cultural resources orientation. All educational groups must be accompanied by an approved guide. Site interpretation programs must be approved by the Land Manager and the SHPO, in consultation with the `Ohana, prior to the implementation. Trails and interpretive signs must be installed only in areas designated by the interpretive programs.

#### **ENVIRONMENTAL MANAGEMENT**

##### **Soil Stabilization**

Possible Adverse Effects: Generally, soil stabilization techniques have beneficial effects to sites. Nevertheless, if stabilization measures such as berm construction, terracing and building of check dams take place in an archaeological site effects listed under "Effects Common to Many Activities" can occur.

Ways to Avoid Adverse Effects: The stabilization area must be approved by the Land Manager before the start of the project. Soil stabilization personnel must attend the cultural resources orientation.

##### **Planting and Maintenance of Vegetation**

Possible Adverse Effects: Ground disruption caused by plowing and the excavation of planting holes in or near an archaeological site is an adverse effect. If hydroseeding takes place at a site, the chemicals can cause site damage. Travel to and from the planting site may result in effects listed under "Effects Common to Many Activities."

Ways to Avoid Adverse Effects: Coordinate all planting projects with the Land Manager in order to avoid archaeological sites. If archaeological sites are hydroseeded for stabilization purposes, all historic preservation law requirements must be met before the start of the project.

## **CONTROL OF PESTS**

### **Introduction of Plant and Animal Pests**

Possible Adverse Effects: Animal activity such as burrowing can damage sites and overgrazing can cause erosion. Tree and plant root growth can damage sites.

Ways to Avoid Adverse Effects: Do not introduce any plants or animals to the island without the approval of the Land Manager.

Any person or group applying for access to Kaho`olawe should consult this Section VI in preparation of the Cultural Resource Effect Statement (described in the next Section) in order to assess the effects of their activities on the island's finite and non-renewable cultural resources.

## **SECTION VII**

### **MANAGEMENT PROGRAM**

For eighteen years the Navy has pursued procedures for the avoidance and mitigation (lessening) of adverse effects on the cultural resources of the Kaho`olawe Archaeological District. The Navy has remained in compliance with Section 106 of NHPA by following the procedures in 36 CFR 800 for undertakings on Kaho`olawe, in consultation with the Hawaii SHPO and the Advisory Council. Other management procedures to mitigate adverse effects include the survey and inventory of archaeological sites, the depiction of archaeological sites on a training map so sites can be avoided during military training exercises, the listing of the District in the National Register, compliance with the Kaho`olawe MOA and Consent Decree, an archaeological data recovery program, soil conservation and site stabilization efforts, and the curation of collected artifacts.

The Navy recognizes Kaho`olawe's cultural value and has participated in the preservation and enhancement of Kaho`olawe's contemporary cultural values by providing access for religious, cultural, scientific and educational purposes and consulting with the Protect Kaho`olawe `Ohana and other interested persons in matters pertaining to traditional cultural values.

This CRMP is designed to ensure that Kaho`olawe's cultural resources are protected and that contemporary cultural values are preserved. The management program consists of three steps:

- Completion of a Cultural Resource Effect Statement (CREST) by all potential users of the island
- Review of the CREST by the Land Manager, the `Ohana and other appropriate parties in consultation with SHPO
- Compliance with applicable historic preservation laws

#### **THE CULTURAL RESOURCE EFFECT STATEMENT (CREST)**

##### **What is a CREST?**

The CREST is a form to be completed by any group or individual planning any new undertaking in the District (see the example on the following three pages). The applicant must submit the completed CREST to the Land Manager at least three months before the date of the planned undertaking. The CREST provides the Land Manager with a description of the undertaking and its location, and helps to identify any effects it may have on the District.

Once a CREST has been approved, the activity may be repeated without filling out subsequent CRESTs; simply write a letter informing the Land Manager that the activity is the same as described in the original CREST statement. If the activity changes in any way (for example, soil stabilization in a new area, or repair of a different structure), a new CREST must be submitted.

All activities are subject to periodic monitoring. A CREST covers only cultural resource preservation and is not a permit for general access. CRESTs will only be processed for activities which are not prohibited by other regulations.

### **How to fill out a CREST**

CREST forms may be obtained from the Land Manager. Read the Cultural Resources Management Plan before filling out a CREST in order to familiarize yourself with the types of cultural resources on Kaho`olawe, how they can be affected, and the historic preservation laws protecting them. The following is a step-by-step explanation of how to fill in each section of the CREST. You need only fill out items 1-4; the Land Manager will complete the remaining items. If more space is needed, add continuation sheets.

1. a. Applicant: Provide the full name of the organization, sponsor, or individual who is applying. (For example, Department of Defense, State of Hawaii, Protect Kaho`olawe `Ohana, James Doe, Ph.D.)

1.b. Type of Activity: Provide a brief phrase that identifies the general kind of activity planned. (For example, construction project, educational visit, archaeological investigation, soil stabilization work.)

**EXAMPLE**

**CREST  
CULTURAL RESOURCE EFFECT STATEMENT**

ITEMS 1-3 TO BE FILLED OUT BY APPLICANT

1. Description of the proposed undertaking

a. Applicant:

b. Type of Activity:

c. Description of Activity:

d. Location of Activity:

(1) Description of Location:

(2) Location of Activity on Map (attached Figure 4):

e. Schedule of Activity:

2. List of Archaeological Sites in and Adjacent to the Activity Area:

3. Description and Explanation of Potential Effects of the Activity on the District (see Section VI of CRMP):

Figure 4 *map of Kaho`olawe is inserted here to be part of the CREST as a separate page*

**ITEMS 4-8 TO BE COMPLETED BY THE LAND MANAGER**

4. Determination of activity's effect on cultural resources (circle one):
    - a. No effect (if no effect do not complete sections 5, 6, 7 and 8)
    - b. Effect, but not adverse
    - c. Adverse effect
  5. Procedure to avoid or negate the effect (circle all that apply):
    - a. Avoidance of archaeological sites and features.
    - b. Data recovery.
    - c. Preparation of guidelines to control access and prevent vandalism and inadvertent damage to resources.
    - d. Attend the cultural resources orientation.
    - e. Other (specify):
  6. Description of rejected alternatives to avoid or minimize the effect and the reasons for their rejection:
  7. Documentation of correspondence with interested persons or organizations.
  8. Proposed mitigation measures:
    - a. Project design and Archaeological Research Design
    - b. Data recovery procedures.
    - c. Other (specify):
- 1.c. Description of Activity: Provide a brief summary of all major aspects of the proposed activity. (Describe the use of any facilities, the number of people involved, sites to be visited, trails to be used, etc.)
- 1.d. Location of Activity: (1) Describe the location of the activity including roads, trails, staging areas, camps, etc. (2) Mark all activity areas on the map; indicate roads and trails to be used, where camps will be located, and the area the activity will cover.
- 1.e. Schedule of Activity: Provide the dates the activity will begin and end. If the activity involves several visits to Kaho`olawe, include those dates.
2. List of archaeological sites in and adjacent to the activity areas: Refer to the attached map and list the archaeological sites by number.
3. Description of potential effects of the activity on the District: Refer to Section VI of the CRMP entitled "Potential Effects on Cultural Resources." If your activity includes any of the potential effects discussed, describe the effects. For example, if the activity includes any effects listed under "Effects Common to all Undertakings," list the ones that apply.

**REVIEW OF THE CREST BY THE LAND MANAGER**

The Land Manager reviews the CREST in consultation with the SHPO and the `Ohana, and makes sure the activity is in compliance with historic preservation laws. If no effects are

involved in the activity, the Land Manager will notify the applicant that the activity meets CRMP requirements.

#### **CONSULTATION WITH SHPO, ACHP AND COMMUNICATION WITH INTERESTED PERSONS**

If the activity is found to have an effect, but the effect is not adverse (will not harm cultural resources), the Land Manager consults with SHPO or sends SHPO documentation of their finding, and notifies the Advisory Council. If the activity is found to have an adverse effect (the activity may damage cultural resources), the Land Manager consults with the SHPO, the `Ohana and other appropriate Native Hawaiian groups, and, in some cases, the Advisory Council, to develop ways to avoid or mitigate the effect. The activity cannot take place until the legal requirements have been met.

#### **EXISTING AND POTENTIAL PENALTIES**

If an activity is found to have an adverse effect on cultural resources after approval of the activity by the Land Manager, the Land Manager will notify the CREST applicant and the activity will cease until the applicant complies with applicable historic preservation laws. If any violation of the Archaeological Resources Protection Act of 1979 (ARPA) occurs (see Section V), the violator will be subject to a felony conviction, fines and imprisonment.

#### **PERIODIC REVIEW OF CRMP**

The CRMP will be reviewed every five years, or as the need arises. When Federal ownership of Kaho`olawe is terminated, the CRMP will be reviewed by the SHPO, the new Land Manager and other interested parties and revised if applicable.

## **SECTION VIII**

### **CULTURAL RESOURCE ENHANCEMENT PROGRAMS**

The CRMP is concerned not only with protecting Kaho`olawe's cultural resources but seeks ways to restore and enhance them. Various programs and strategies having the potential to restore and enhance the cultural resources are discussed below.

#### **SITE STABILIZATION PROGRAM**

In accordance with the Consent Decree, the Navy stabilized many archaeological sites in danger of erosion (Hommon 1983; Rosendahl 1987). These stabilization efforts have been mostly reactive--that is, they are implemented when erosion has already damaged an archaeological site or where an archaeological site is in immediate danger. A site stabilization program will standardize the evaluation and decision making procedures for stabilization projects and maintain the integrity of significant cultural resources. A site stabilization program should be developed and implemented by the Land Manager. The program may include the following:

- Examination of the literary base for site stabilization procedures
- Consultation with stabilization experts
- Evaluation of stabilization options
- Formulation of criteria to assess the need for site stabilization
- Setting up a volunteer program for stabilization activities
- Suggestions for revegetation/environmental restoration in the site area

#### **CULTURAL RESOURCE MONITORING PROGRAM**

Site conditions on Kaho`olawe cannot be regarded as fixed; the effects of use of the island by various groups and natural factors such as rainfall runoff, etc., have cumulative effects and site stability cannot be assumed over any long period of time. If sites are not inspected occasionally, what are considered to be small-scale effects by human and natural factors can aggregate into cumulative, large-scale damage, resulting in adverse effects. A monitoring program should include:

- Appointing a group or entity responsible for monitoring
- Developing record-keeping and reporting procedures
- Establishing intervals of inspection

#### **EDUCATIONAL PROGRAM**

An educational program may be developed by a group or individual in consultation with the Land Manager and the `Ohana to inform visitors about the cultural resources on Kaho`olawe. The island can also be used as a means of teaching Hawaiian history and culture. The program may include:

- On-site interpretive talks
- Brochures
- Information about volunteer opportunities on Kaho`olawe
- Public lectures or presentations on Kaho`olawe's cultural resources

### **RESEARCH PROGRAMS**

The Land Manager encourages the development of cultural resource research programs on Kaho`olawe. Research programs such as oral history studies concerning Kaho`olawe and further cultural value studies are needed. Many research issues can be addressed by archaeological data from Kaho`olawe; some of these research issues can be found in the National Register Nomination Form (Hommon 1980b).

### **CULTURAL PROGRAMS**

Cultural programs that stress the island's spiritual significance to the Hawaiian people and its importance to their culture can be developed by, or in conjunction with the `Ohana,

### **FIRE CONTROL PROGRAM**

Fire can adversely affect archaeological sites by destroying site material, causing erosion, and introducing modern charcoal and carbon into sites. Additionally, adverse effects can occur from the use of heavy fire-fighting equipment and construction of helicopter landing zones for transporting fire crews. A fire control program with an emphasis on protecting cultural resources should be developed.

Other strategies for enhancement and restoration of cultural resources include a program for the repatriation of human remains, burial goods, sacred objects, and objects of cultural patrimony in accordance with the provisions of NAGPRA. There should also be a program to evaluate archival facilities for artifacts, photos, etc.

## SECTION IX

### GLOSSARY

**Advisory Council on Historic Preservation (Advisory Council).** A Federal agency, established by the National Historic Preservation Act, that advises the President, Congress, and Federal agencies on historic and archaeological preservation matters. It also helps implement Section 106 of the National Historic Preservation Act. See Section V.

**Activity.** Any action, program or project which may have an effect on cultural resources.

**ARPA - Archeological Resources Protection Act of 1979 (PL 96-95).** Prohibits excavation or removal of archaeological resources from public land without a permit issued by the federal Land Manager, provides penalties for vandalism, and guarantees confidentiality concerning site locations. See Section V.

**Consent Decree.** A Consent Decree by the U. S. District Court District of Hawaii, dated December 1, 1980, in which the Navy agreed to cooperate with the State Historic Preservation Officer in surveying the island, to refer any bombing activities that might damage cultural resources to the Secretary of the Interior for an opinion respecting the resources' eligibility for inclusion in the National Register without waiting for completion of the survey, to seek an eligibility determination for the entire island, and submit a comprehensive management to the Advisory Council on Historic Preservation. See Section II and Appendix C.

**CREST - Cultural Resource Effect Statement.** A form to be completed by any group or individual planning a new activity or project in the Kaho`olawe Archaeological District. See Section VII.

**CRMP - Cultural Resources Management Plan.** A plan to establish procedures and guidelines for the management of the Kaho`olawe Archaeological District.

**Cultural Resources.** A collective term including objects, buildings, district, sites or places of cultural, historic and/or archaeological significance. The term "cultural resources" as used in the CRMP has the same meaning as "historic properties" used in the National Historic Preservation Act and "historic places" as in the National Register of Historic Places.

**District.** In general, a geographically definable area possessing a significant concentration, linkage, or continuity of buildings, structures, objects, or archeological sites united by association with past events or aesthetically by plan or physical development (36 CFR 60). In the CRMP "District" refers to the Kaho`olawe Archaeological District.

**Effect.** A change in the character or use of a cultural resource.

**Feature, Archaeological.** A spatially limited cluster of evidence of past human activities whose boundaries are determined by the extent of the evidence and/or by the boundaries of the artificial structure or natural land-form that contains it. An archaeological site can contain one or more features.

**Heiau.** A place of worship or sacrifice, ranging from simple upright stones to massive temple platforms (Kirch 1985). Most people think of *heiau* as large structures.

**Interested person.** Those individuals and organizations that are concerned with the effects of a particular undertaking on historic properties (36 CFR 800.2).

**Kaho`olawe Archaeological District (District).** An archaeological district listed on the National Register encompassing the island of Kaho`olawe and including 544 archaeological sites.

**KICC - Kaho`olawe Conveyance Commission.** A Commission established to study and recommend terms and conditions for returning Kaho`olawe from the United States to the State of Hawaii. See Section V.

**Land Manager.** The entity having jurisdiction and management control of Kaho`olawe. At present, the U.S. Navy is the Land Manager.

**Memorandum of Agreement (MOA).** An agreement document signed by a federal agency, SHPO and the Advisory Council setting forth measures to avoid, reduce, or mitigate adverse effects on historic properties, or to accept effects in the public interest. An MOA evidences that the agency has fulfilled its responsibilities under Section 106 of the National Historic Preservation Act. The Kaho`olawe MOA is discussed in Section II and is included as Appendix D.

**Mitigation.** The measures used to preserve, protect or minimize an undertaking's effects on cultural resources. Section 106 of the National Historic Preservation Act requires mitigation when any cultural resource listed in the National Register will be adversely affected.

**NHPA - The National Historic Preservation Act of 1966, as Amended (PL 89-665).** NHPA establishes a program for the preservation of cultural resources in the United States. See Section V.

**National Register of Historic Places (National Register).** A register of significant American cultural resources. It is maintained by the U.S. Secretary of the Interior. See Section V.

**National Register Eligibility Criteria.** The criteria set by the Secretary of the Interior to evaluate cultural resources in order to determine if they are eligible for listing in the National Register of Historic Places. See Section IV.

**Pre-contact.** Before 1778, the year of the first documented contact between Hawai`i and the non-Polynesian world.

**Protect Kaho`olawe `Ohana (`Ohana).** A group of Native Hawaiians and their supporters who have actively sought to end the bombing and military use of Kaho`olawe and secure the island's return to the people of Hawai`i. The `Ohana has access to the island for religious purposes and has participated in revegetation and conservation programs. It is concerned with the preservation and protection of cultural resources on Kaho`olawe. See Section V.

**Research Design.** A programmatic statement outlining the reasons for the research, a synthesis of the existing data, research questions and research strategy.

**Section 106 of the National Historic Preservation Act.** This section requires a federal agency to allow the Advisory Council an opportunity to comment on any undertaking that will adversely affect National Register eligible cultural resources. The procedures for compliance are provided in 36 CFR 800. See Section V.

**SHPO - State Historic Preservation Officer.** The official within each State authorized by the Governor of that state to carry out the provisions of the National Historic Preservation Act. See Section V.

**Significant.** A term describing cultural resources listed in or determined to be eligible for inclusion in the National Register of Historic Places.

**Site, Archaeological.** A location with evidence of human activity in the past that consists of either a single feature or a complex of features.

**Structure.** Something built or constructed. On Kaho`olawe these include such things as *heiau*, walls, etc.

**Undertaking.** Any project, activity, or program financed, assisted, or licensed by the Federal government that can result in changes in the character or use of cultural resources (36 CFR 800.2(o)). See Section VI.

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